

Ser. No. 09/976,309Atty.Dkt. No. 2455-4074US5**IN THE CLAIMS:**

1-44. (Currently Canceled)

45. (Previously Added) A method for determining a failed call, in a telephone communications network, comprising the steps of:

- a) receiving at an originating switch node a request message from a local exchange carrier serving a calling party;
- b) validating the request message at the originating switch node and appending appropriate transaction information to form an information packet that, includes an error code field noting whether an error was detected in validating the requests message;
- c) sending the information packet to a network operations element to request message routing;
- d) receiving instructions from the network operations element for routing the requests message and sending the request message to a terminating switch node, via a signal transfer point using the received routing instructions;
- e) sending a release message to the local exchange carrier when the originating switch does not receive any one of an address complete message, an answer message and a release message from the terminating switch;
- f) appending the information packet to the release message, including an entry in the error code field of the information packet indicating that a time-out error occurred and forwarding the information packet to the network operations element; and
- g) activating a fault management application that proactively correlates message copies received to audit message traces for each call and to check error codes for determining that a call has failed

53353 v1

Ser. No. 09/976,309

Atty.Dkt. No. 2455-4074USS

46. (Previously Added) The method of Claim 45 further comprising:

h) checking for an incomplete message trace and the entry in the error code field to determine if a call failed before replicating the Request Message and sending the call.

47. (Previously Added) The method of Claim 45 further comprising:

i) receiving messages at the network operations element from all network elements that provided a path through the network for the call.

48. (Previously Added) The method of Claim 45 further comprising:

j) storing information packets from all networks elements that provided a path for the call, the packets providing a complete message trace and data about each call in which an error was detected, the packets being accessible to the fault management application for determining whether and how a call failed.

49. (Previously Added) The method of Claim 45 further comprising:

k) determining whether a network element has a corrupted routing table if the request message is sent to the wrong terminating switch node.

50. (Previously Added) A method of replicating a failed call made in a telephone communication network, comprising the steps of:

a) forwarding an information packet containing an error code to a network operations element upon detecting a failed call in an originating switch node;

Ser. No. 09/976,309Atty.Dkt. No. 2455-4074USS

- b) formulating and launching a Request message from the network operations element through a switching network to the originating switch node to replicate the failed call;
- c) sending a second information packet to the network operations element from the originating switch node requesting processing and routing instructions for the replicated call;
- d) providing a response message to the originating switch node indicating the replicated call is a test call requiring sent and receive messages to be forwarded to the network operations element and providing instructions to process and route the replicated call;
- e) sending a request message to a terminating switch node, via network elements, and embedding within the message a signal indicating that the call is a test call;
- f) sending a network element information packet to the network operations element from each network element traversed by the call, the network element information packet containing a copy of each message sent or received by the traversed network element;
- g) determining from the network element information packet from each network element providing a path for the call an indication whether any one of an address complete message, an answer message and a release message was received by the originating switch node;
- h) examining the network element information packet received from the originating switch node and the terminating switch node receiving a misdelivered one of the address complete message, an answer message and a release message to determine the network element causing a routing error; and
- i) determining from the misdelivered message the identification of the terminating switch node which should have received the message if there was no routing error

53353 v1

Ser. No. 09/976,309

Atty.Dkt. No. 2455-4074US5

51. (Previously Added) The method of claim 50 further comprising:
  - j) modifying a routing table of the network element causing the failed call to correct the routing error;
52. (Previously Added) The method of claim 50, further comprising:
  - k) receiving at the network operations element a full complement of messages received and transported by each element network traversed by the test call;
53. (Previously Added) The method of claim 50, further comprising:
  - l) assigning different test call prefixes for different types of test calls.
54. (Previously Added) The method of claim 50, further comprising:
  - m) verifying the transmission performance of a path between switch nodes traversed by the test call.
55. (Previously Added) A method for providing address translation for all calls in a telephone network, including those without a physical destination, comprising:
  - a) receiving a request message at an originating switch from a local exchange carrier, the request message containing a call address;
  - b) generating at the originating switch node an information packet that contains the received request message which contains called number which may be the address of physical location or a number requiring translation to a physical address for transmission to a network operations element;

53353 v1

Ser. No. 09/976,309

Atty.Dkt. No. 2455-4074USS

- c) storing the information packet in a database accessible by the network operations element;
- d) translating the call address to a destination address having a physical location using at least one of an automatic number identification table and a dialed number table if the call does not have a physical address;
- e) providing the originating switch node instructions for routing the call to the destination address via the network elements;
- f) generating at the network elements traversed by the call and transmitting to the originating switch node a network element information packet descriptive of the call processing at the network element; and
- g) forwarding to the network operations element for storage in the database the network element information packets received from the network elements traversed by the call.

56. (Previously Added) The method of claim 55 further comprising:

- h) employing the dialed number table for processing and routing the call.

57. (Previously Added) The method of claim 55 further comprising:

- i) Employing a network map table to provide the originating switch node with information regarding servicing signal transfer points.

58. (Previously Added) The method of claim 55 further comprising:

- j) sending all call received by the originating switch node to the network operations element for translation.

Ser. No. 09/976,309

Atty.Dkt. No. 2455-4074US5

59. (Previously Added) The method of claim 55 further comprising:

k) translating the call to any destination address provisioned in the dialed number table

60. (Previously Added) The method of Claim 55 further comprising:

l) requesting another network element to provide instructions to a designated switch

61. (Previously Added) The method of Claim 55 further comprising:

m) provisioning the network operations element and the service control points for call routing at the option of the network operations element.

53353 v1

PAGE 8/9 \* RCVD AT 8/30/2004 3:26:56 PM [Eastern Daylight Time] \* SVR:USPTO-EFXRF-17 \* DNIS:8729306 \* CSID:202 857 7929 \* DURATION (mm:ss):02:32